CITY OF SAN ANTONIO
METROPOLITAN HEALTH DISTRICT

COVID-19 Monthly Epidemiological Report
August 2021

*Unless otherwise indicated, data for analyses in this report were extracted from Texas Health Trace on **09/13/2021** and include cases with event dates† through **08/31/2021**. Results are subject to change.*

Key Takeaways

Increase in New Cases & Positivity Rate

- Bexar County reported 52,585 new cases (3.2 times those of July), 7,243 new COVID-19 associated hospitalizations, and 222 deaths — an increase of 3.3 and 5.3 respectively from July.
- Positivity rate had a high of 22.0% during the second week of August and steadily decreased to 7.6% at the end of the month — the lowest positivity rate since the beginning of July.

Hospitalizations and Deaths

- With an initial decline in the number of deaths, cases saw an increase of expired patients from the second week to the last week of the month by an 8.4 fold — an increase from 7 deaths to 59 deaths by end of the month.

Age Group Cases

- COVID-19 cases aged 0-9 make up 12.5% of August 2021 cases in comparison to the overall average of 7.6% of total COVID-19 cases for that same age group.
- August's age group 30-39 now makes up the highest age-specific case rate among all age groups with 2,692 cases per 100,000

I. Current Status and Overview of COVID-19 in Bexar County

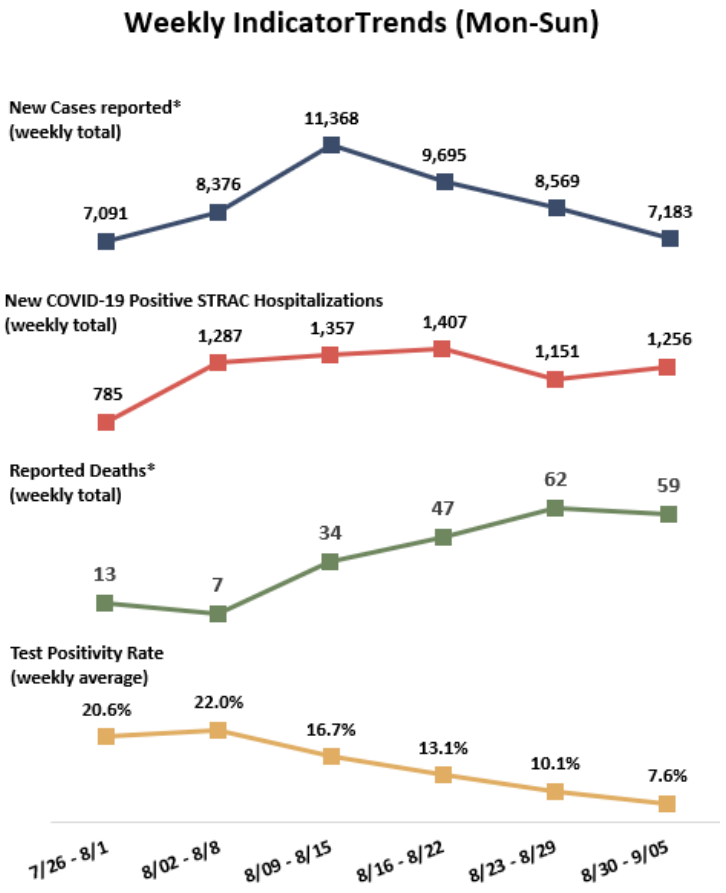
During the **six calendar weeks** that include August, Bexar County reported* 52,585 new cases — 3.2 times those of July — that occurred within the previous 14 days (excludes backlog), plus 7,243 new COVID-19 associated hospitalizations, and 222 deaths (an increase of 3.3 and 5.3 respectively from July). All indicators — except test positivity — increased during August; test positivity averaged 14.3% compared to 15.6% for July.

Weekly (Monday-Sunday) newly reported cases increased 60% by the third calendar week, and then declined. By the end of August, new cases were only 1% higher than when the month began.

Weekly new hospital admissions increased 64% by the second calendar week, and remained within 10% of high level for the remainder of August.

Weekly reported deaths initially declined, but then increased sharply over the next four weeks, a total of 8.4-fold. Between the first and last weeks of August, deaths increased 4.5-fold.

Weekly test positivity remained elevated during the first two calendar weeks then declined steadily through the remainder of August — a 13% decrease from the initial rate.

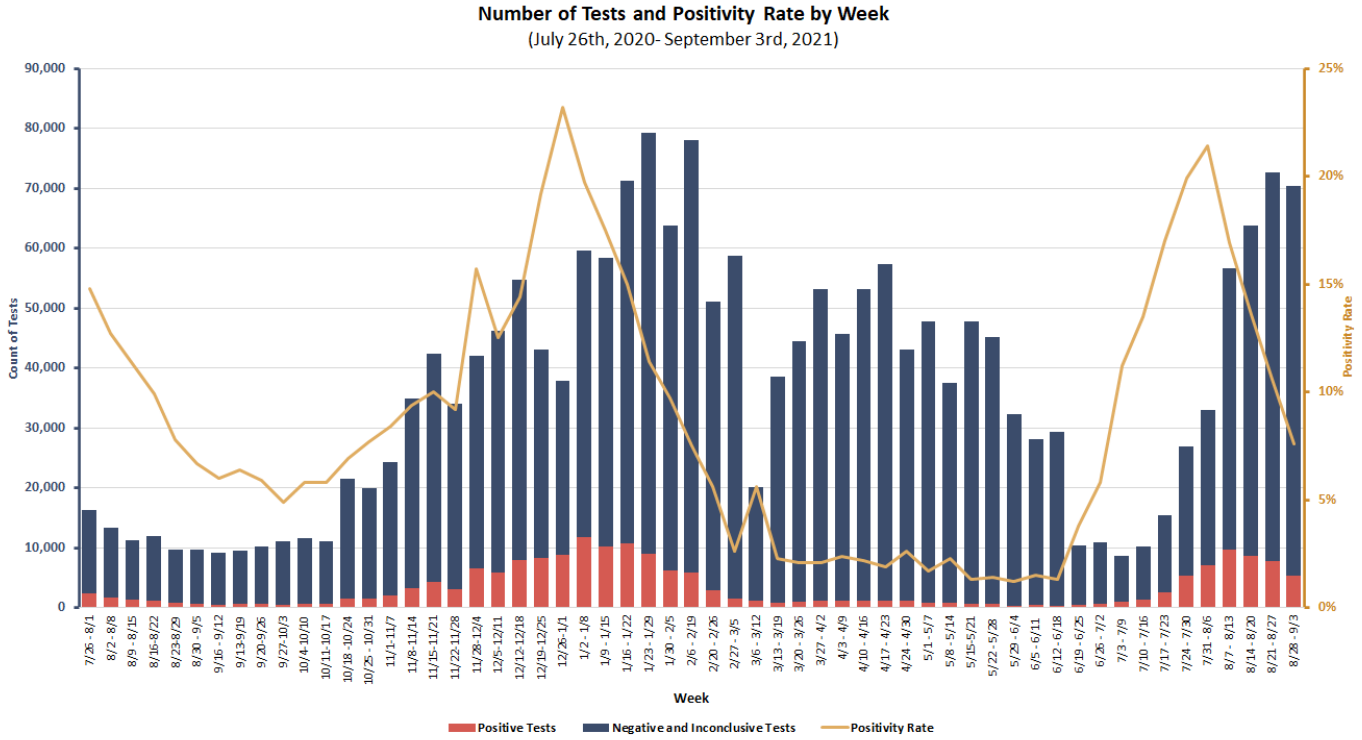


*Reported cases and deaths may have occurred anytime during the previous 14 days. Delayed reports of backlogged cases and deaths are not included in weekly totals.

II. Testing & Positivity Rate

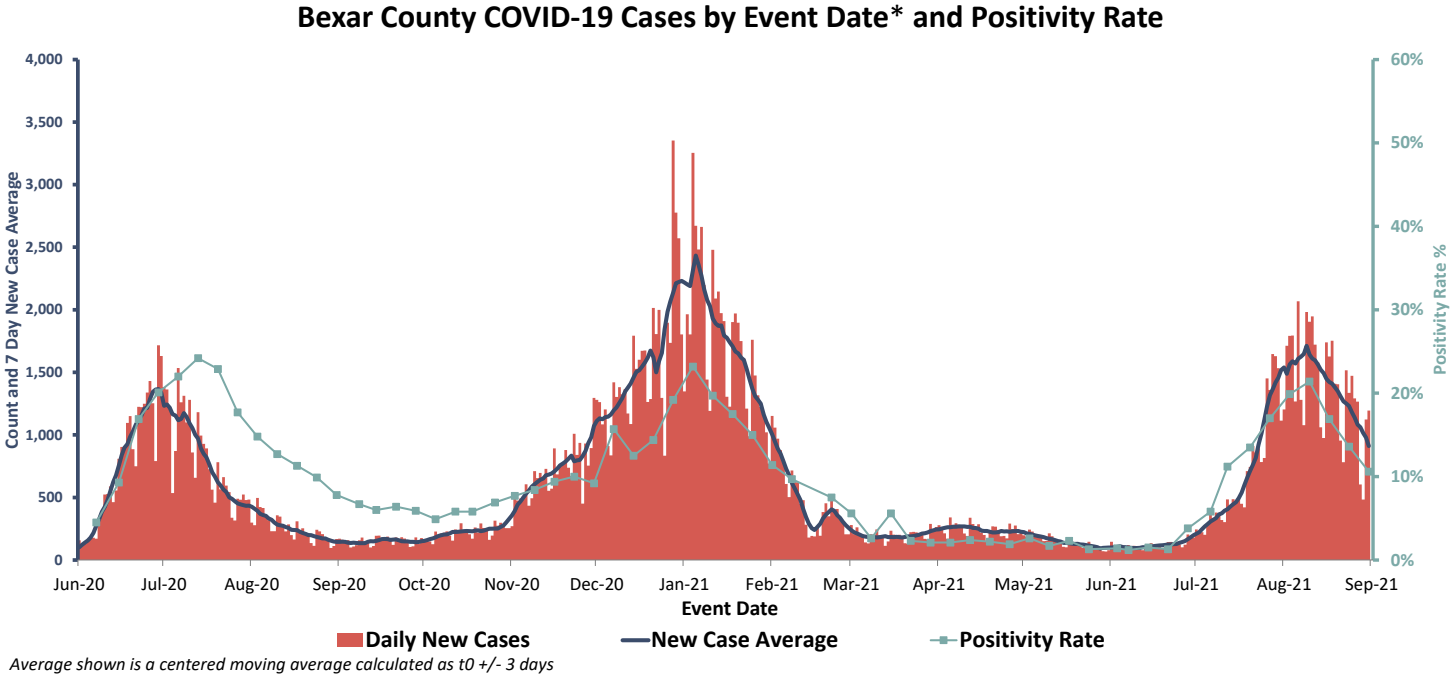
Bexar County's COVID-19 weekly test positivity rate decreased in August, with a **low of 7.6%** during the last week of the month — **the lowest positivity rate since the end of June 2021.** About 250,000 tests were processed over the month. The month of August had a 357% increase in tests compared to the month of July.

Source: Aggregate Labs Report of labs conducting COVID-19 testing



III. Trends & Demographic Characteristics among COVID-19 Cases

August 2021 demonstrated a significant decrease of COVID-19 in the community with cases having decreased from 2,068 in the beginning of August to a 7-day moving average of 1,131 new cases on August 31st. This current surge took about 13 more days to peak compared to the first surge and is displaying an overall slower rate of decrease in cases.



Average shown is a centered moving average calculated as t0 +/- 3 days

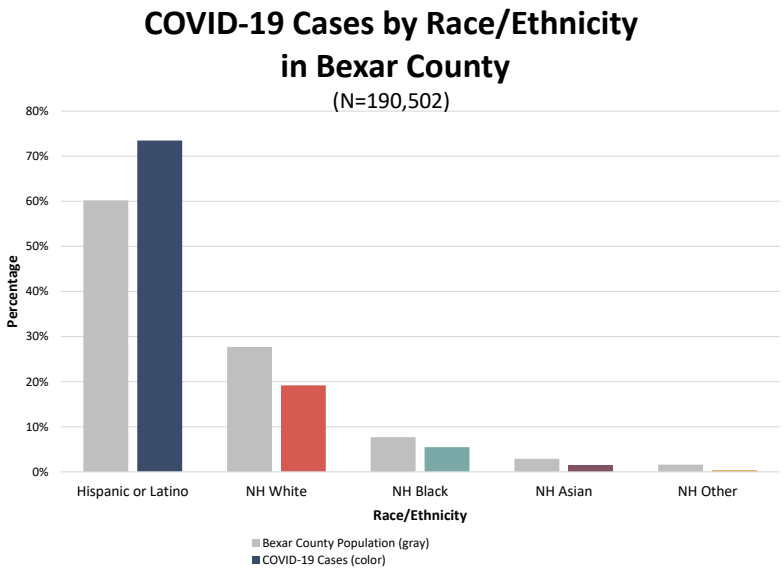
**Event date refers to either illness onset date (for symptomatic cases) or test collection date (for asymptomatic cases or when onset date not available). This differs from Reported Date.*

III. A. Race/Ethnicity Distribution of Cases

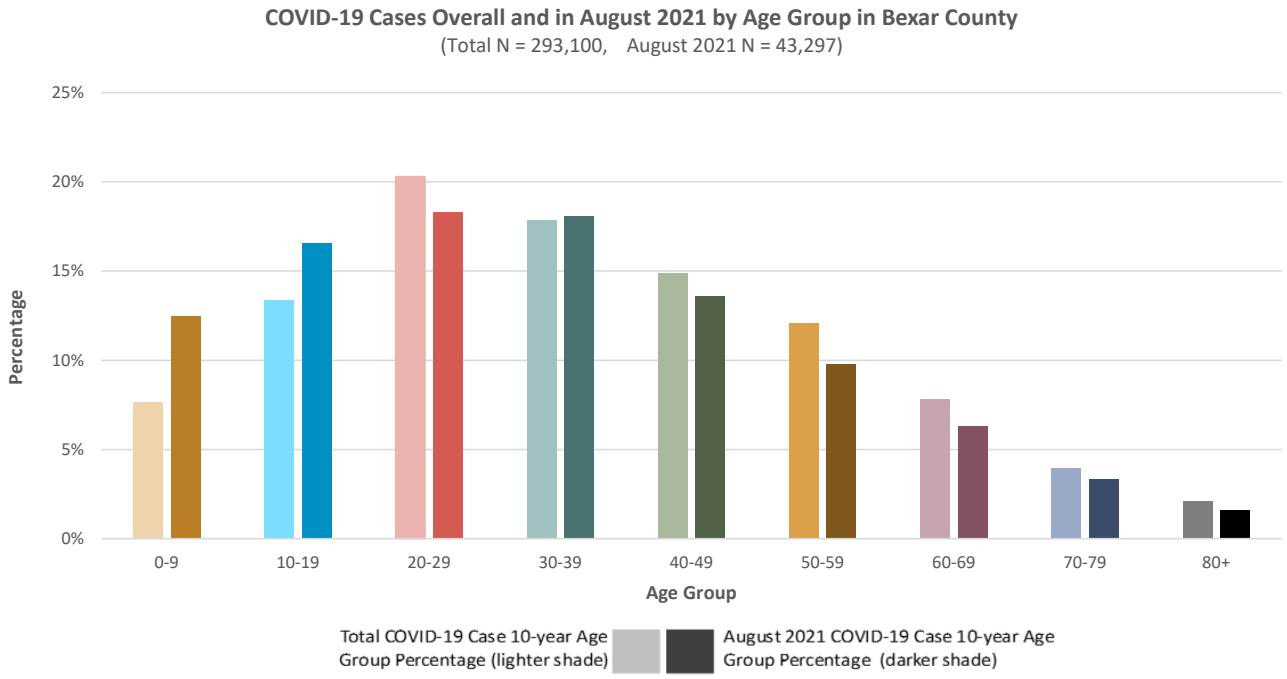
Among cases for whom race/ethnicity data are available (65%), **Hispanic individuals constitute the majority of COVID-19 cases in Bexar County**, and account for a larger proportion of cases than they do the general population of Bexar County. This pattern is persistent across age groups.

Notes:

1. Data on race and/or ethnicity are currently unavailable for about 35% of cases.
2. The number of Bexar County residents above is the ACS (5-yr) 2019 population estimate.
3. NH = Non-Hispanic

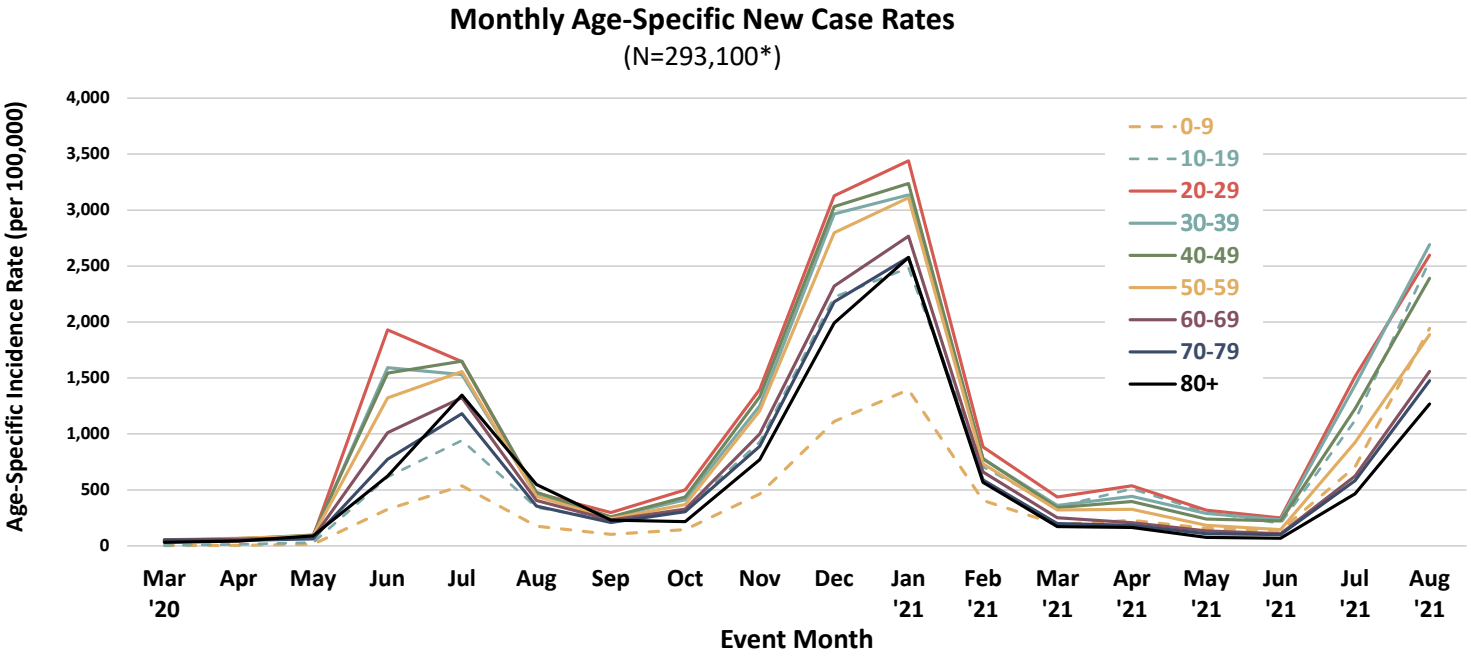


III. B. Age and Gender Distribution of Cases



Overall age distributions of COVID-19 cases continues to show that age range 20-29 makes up the largest proportions of COVID-19 cases, at about **1 in 5 of all cases (20.3%)**. This age group is followed by cases aged 30-39 years old, who make up approximately 17.9% of cases. During the month of August 2021, cases in age groups 0-9, 10-19, and 30-39 made up a higher percentage of cases than the overall pandemic average — the average age of cases in August 2021 (32.9 years) is lower than the average age of all COVID-19 cases during the pandemic (36.4 years). The percentage of cases in age groups 20-29, 40-49, 50-59, 60-69, 70-79, and 80+ are lower in August 2021 than overall during entirety of the COVID-19 pandemic. Notably, **COVID-19 cases aged 0-9 make up 12.5% of August 2021 cases** in comparison to the overall average of 7.6% of total COVID-19 cases, and cases aged 10-19 only make up 13.3% of total COVID-19 cases, but make up 16.6% of August 2021 cases.

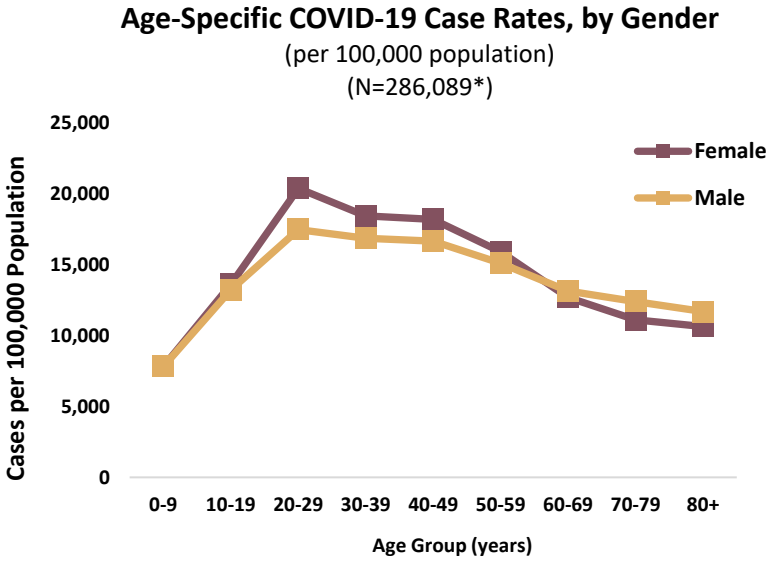
III. C. Age and Gender Distribution of Cases



Age-specific case rates† increased noticeably between July '21 and August '21, approximately 2 to 3-fold in each age group. **In August '21**, the highest rates occurred among adults ages **30-39** (**sage line**), followed in order by age groups **20-29 years** (**red**), **10-19** (**turquoise dashes**), **40-49** (**dark green**), ages **0-9 years** (**beige dashes**), **50-59** (**solid beige**), **60-69** (**dark maroon**), **70-79** (**dark blue**), with the lowest rate among those age **80+ years** of age (**black**). Compared to previous months where age group 20-29 made up the highest case rate, **August's age group 30-39 now makes up the highest age-specific case rate** among all age groups.

Over the course of the pandemic, **12.7% of all residents are known to have had COVID-19**. The largest increase in case rates from July to August were among the 0-9 and 80+ age groups.

†Excludes 177 cases with age not available plus 6 cases diagnosed in February 2020 (0.1%).



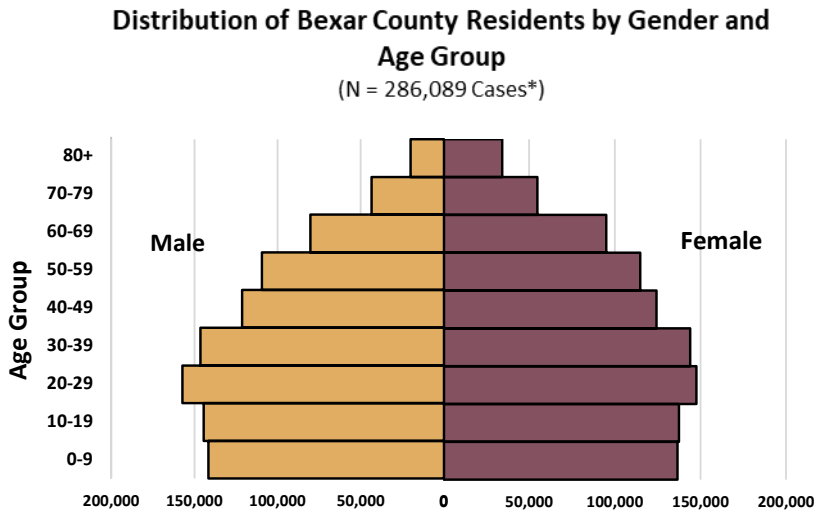
*Excludes 7,190 cases (2.7%) for who age and/or gender was not available.

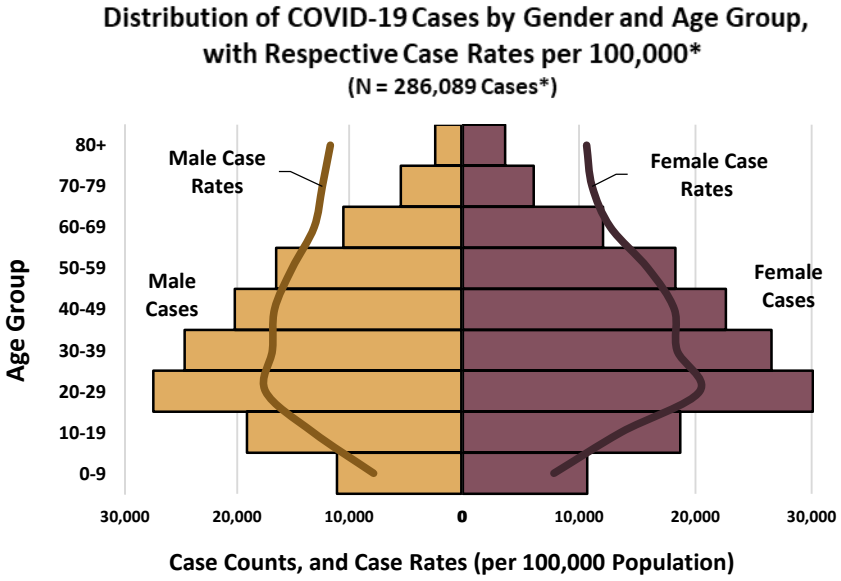
Age-specific rates† also demonstrate how younger adults and women have had the highest rates of COVID-19. This pattern has persisted throughout the pandemic.

Through the end of August '21, the age-adjusted‡ COVID-19 case rates were 15,044 cases per 100,000 females and 14,246 cases per 100,000 males (females 7% higher than males). There were approximately 2,000 cases per 100,000 for each gender in August alone. The overall age-adjusted case rate for the County is now 14,650 cases per 100,000 population, all cases combined.

†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.
‡Age-adjusted rates are weighted using the US Standard Population 2000.

IV. The Extent of COVID-19 in the Bexar County Population





***Excludes 7,190 cases (2.5%) for whom age and/or gender was not available.**

The **greatest numbers of cases have occurred among age group 20-29 years:** 30,106 females and 27,483 males. The smallest numbers of cases have occurred among the oldest age group, 80+ years: 3,633 females and 2,348 males. This general pattern has persisted throughout the pandemic.

Through the end of August '21, a total of 293,279* Bexar County residents are known to have had COVID-19. **August itself added approximately 21,000 cases of each gender.**

Age-specific case rates† (curved lines in lower graph, also shown on previous page) overlay the number of cases per 100,000 Bexar County residents of the same gender and age group, on the corresponding case number bars. The lowest case rates continue to be for young children (ages 0-9 years): about 7,800 cases per 100,000 population of each gender.

Conversely, young adults ages 20-29 have had the highest case rates, with 20,385 cases per 100,000 females and 17,477 cases per 100,000 males. In this age group, the female case rate remains 17% greater than the male rate.

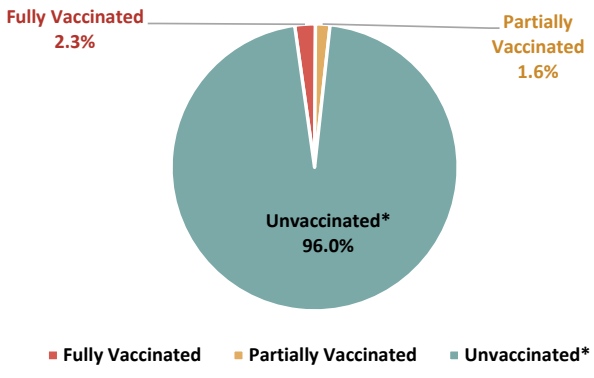
Overall, **15.0% (1 in 6.6) of Bexar County residents are known to have had COVID-19** — 15.0 % of female residents, and 14.2% of male residents.

†Age-specific rates use the ACS (5-yr) 2019 population estimates for Bexar County.
*Gender and/or age data were not available for 7,190 cases (2.5%).

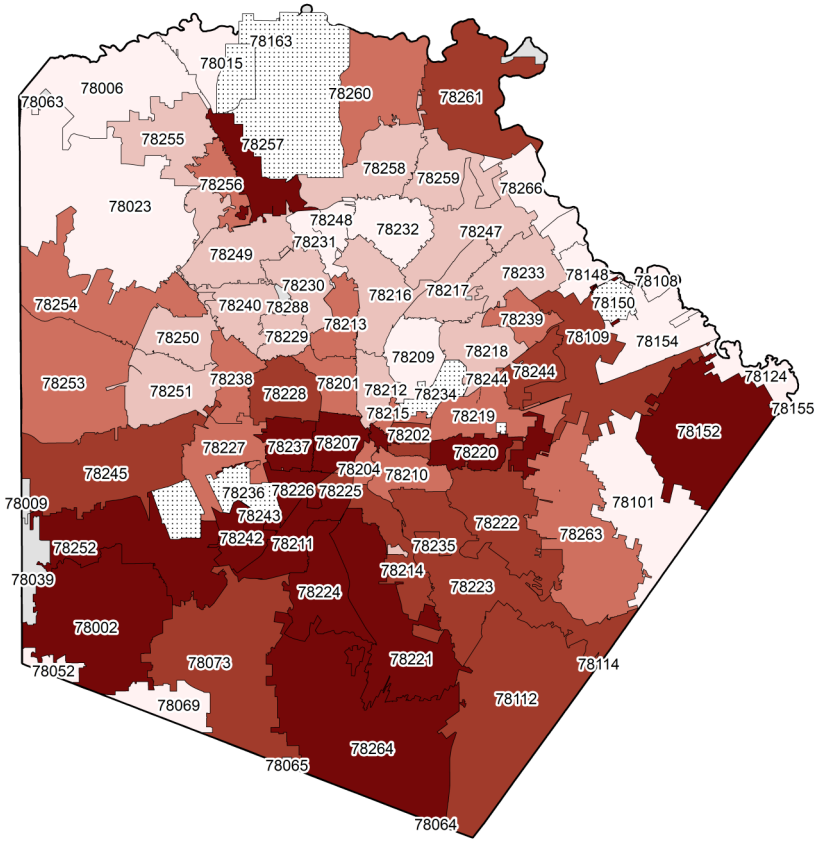
Of the 153,780 COVID-19 cases identified from January 1st 2021 through the end of August 2021, a total **of 6,077 (4.0%) were known to have received some vaccination**[1,2]: 2,506 (1.6%) partially vaccinated and 3,571 (2.3%) fully vaccinated. Cases **fully vaccinated increased from 0.01% in January, to 6.0% in July**.

NOTE: Percentages vaccinated, partially or full, are likely low estimates: no vaccination data were available for at least 56% of cases at time of analysis. August vaccination data were incomplete at time of analysis.

All COVID-19 Cases by Vaccination Status, Since Jan 01, 2021 (N=153,780)



COVID-19 Case Rate per 100,000 Population

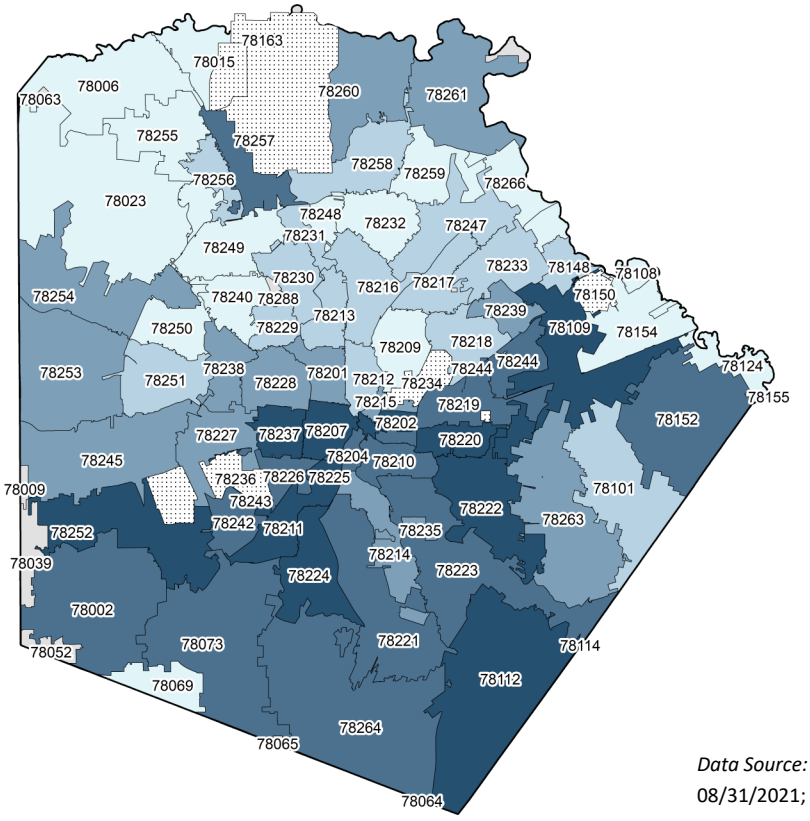


The **geographic distribution of total COVID-19 case rate by zip code continues to show the highest rates of infection have generally been in the southern portion of Bexar County.** The overall COVID-19 case rates range from 113 per 100,000 population to 70,270 per 100,000 population.

COVID-19 Case Rate per 100,000 Population

- 113 - 10,288
- 10,289 - 13,669
- 13,670 - 16,671
- 16,672 - 18,360
- 18,361 - 70,270
- Suppressed due to counts <5
- Military Bases

August 2021 COVID-19 Case Rate per 100,000 Population

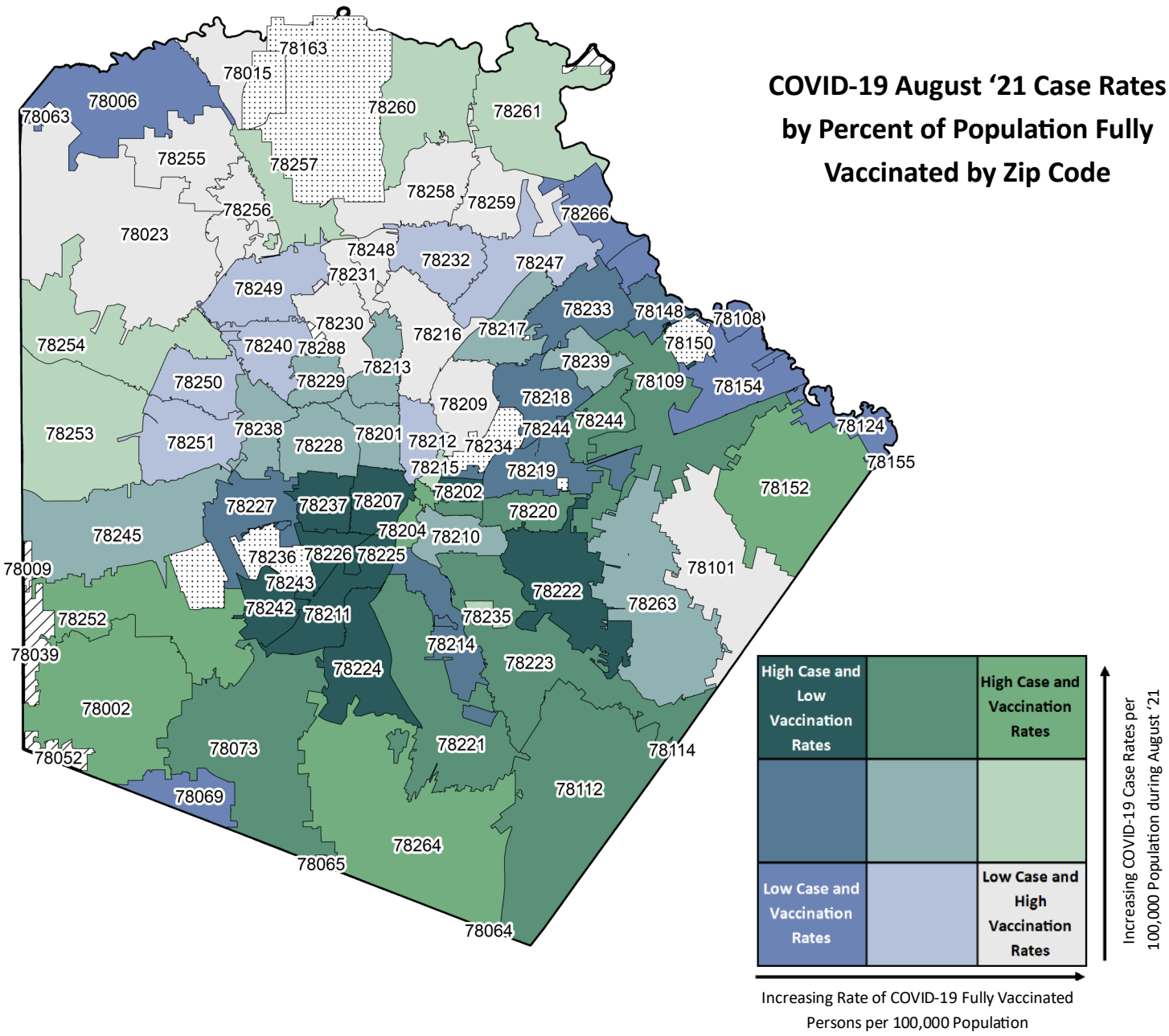


For the month of August 2021, the highest rates of new COVID-19 infections occurred in the eastern. western, and southern portions of Bexar County. **New monthly case rates ranged from 15 cases per 100,000 population to 27,027 cases per 100,000 population during the month of August 2021.**

August 2021 Case Rate per 100,000 Population

- 15 - 1,457
- 1,458 - 2,095
- 2,096 - 2,573
- 2,574 - 2,975
- 2,976 - 27,027
- Suppressed due to counts <5
- Military Bases

Data Source: SAMHD COVID-19 case data through 09/12/2021, event dates through 08/31/2021; U.S. Census, ACS 2019 5-year Population Estimates, Table S0101.



This map shows the geographic distribution by zip code of COVID-19 case rates per 100,000 population during the month of August 2021 (based on Event Date) and the cumulative rate of COVID-19 fully vaccinated persons per 100,000 population. Both rates are divided into low, medium, and high rate categories.

Zip codes shaded dark teal indicate they are in the highest third of new COVID-19 case rates, as well as in the lowest third of rates for fully vaccinated persons. **Zip codes with the lowest rates of fully vaccinated persons and the highest rates of monthly COVID-19 cases tended to be near downtown San Antonio, and slightly to the southeast and southwest of downtown**. Conversely, those zip codes shaded in solid grey indicate they are in the lowest third of new COVID-10 case rates for the month, and the highest third for case rates of fully vaccinated persons. **Zip codes with the highest rates of fully vaccinated persons and the lowest rates of monthly COVID-19 cases tend to be north of downtown San Antonio and in the far northern portions of Bexar County**.

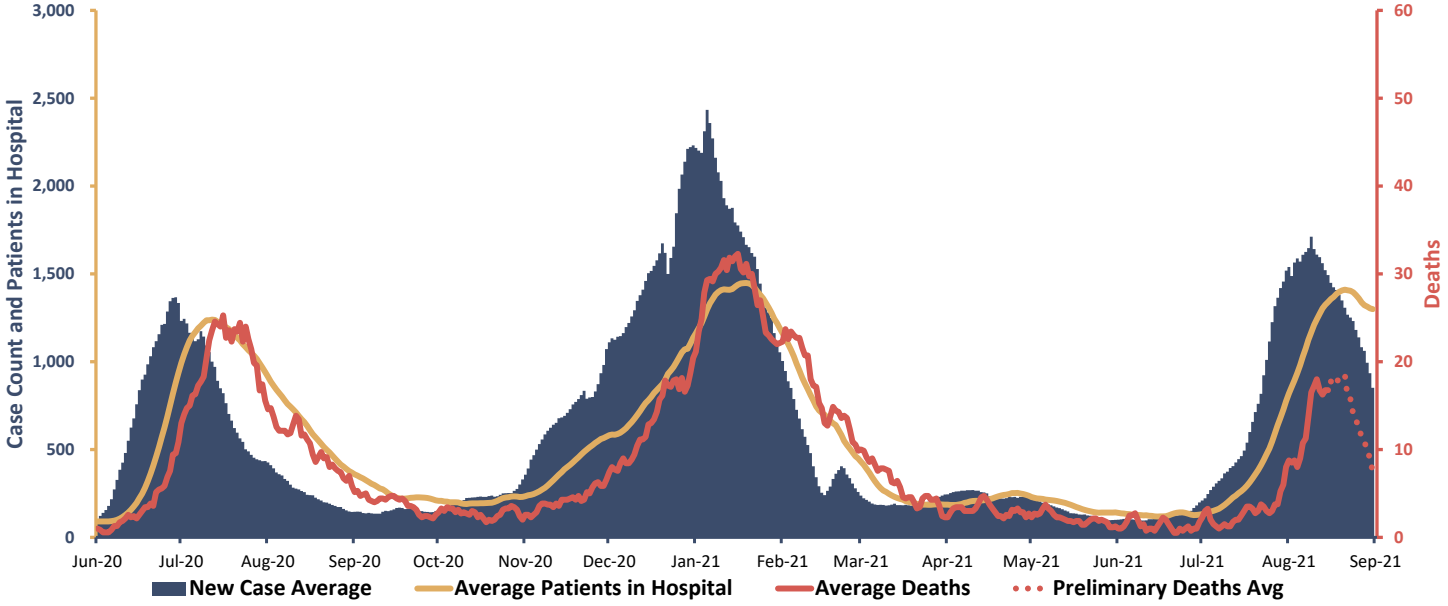
Data Source: SAMHD COVID-19 Database, as of 08/09/2021; U.S. Census Bureau, ACS 2019 5-Year Estimates, Table S1701

V. Hospitalizations and Deaths among COVID-19 Cases

V. A. Hospitalizations

August 2021 demonstrated the rise and peak of the third surge in Bexar County, with the new case average peaking at about 1,700 cases at the beginning of the month. The new case average at the end of August decreased to 851 cases per day. **The difference between the peaks of average new cases and average patients in hospital was about 12 days, similar to the 13 days and 12 days seen in the previous two surges, respectively**. The average patients in area hospitals peaked at about 1,410 cases. Deaths have shown a significant increase and a peak remains to be seen, however the death data for the last two weeks of August are considered preliminary as death certificates make their way to Metro Health for confirmation.

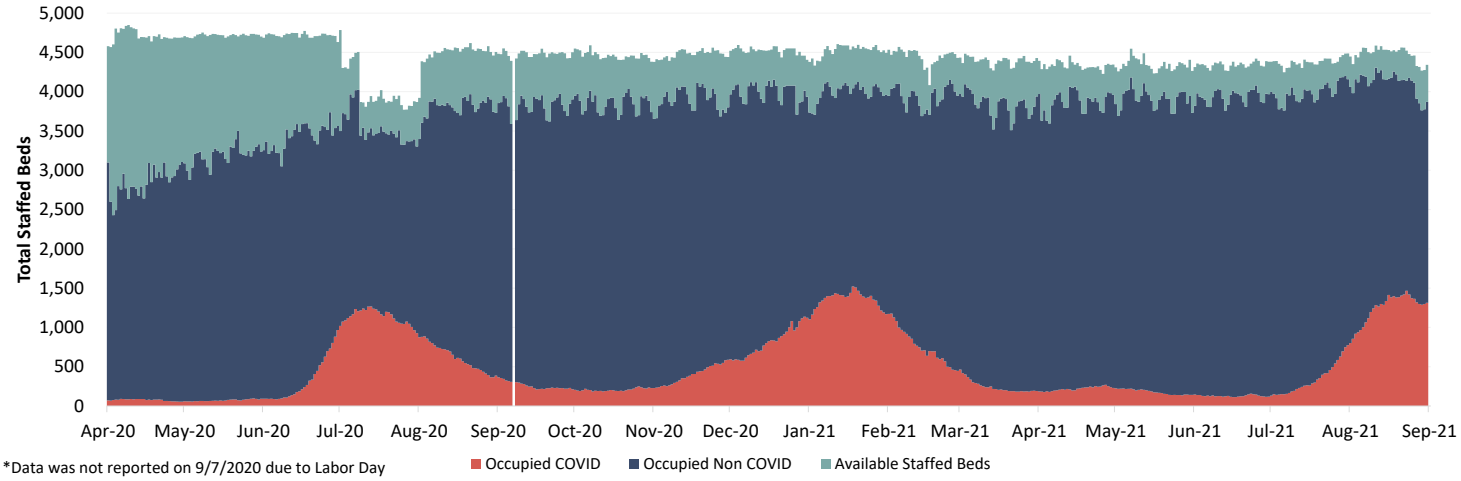
Bexar County Cases by Event Date,
STRAC COVID-19 Hospitalizations and Date of Death



Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 09/13/2021
*Average shown is a centered moving average calculated as t0 +/- 3 days

In August, COVID+ occupancy (coral) demonstrated a significant increase to 1300 beds per day, a 68% increase from July 2021 (775 beds per day)**.** Available (unoccupied) staffed beds (**teal**) made up about 11% of total staffed beds at the end of August. Non-COVID+ occupancy (**navy)** decreased by 25% to an average of 2,517 beds per day in August. This month was also the first time available staffed beds dropped below 300 for more than one day out of the month.

STRAC Hospital Capacity



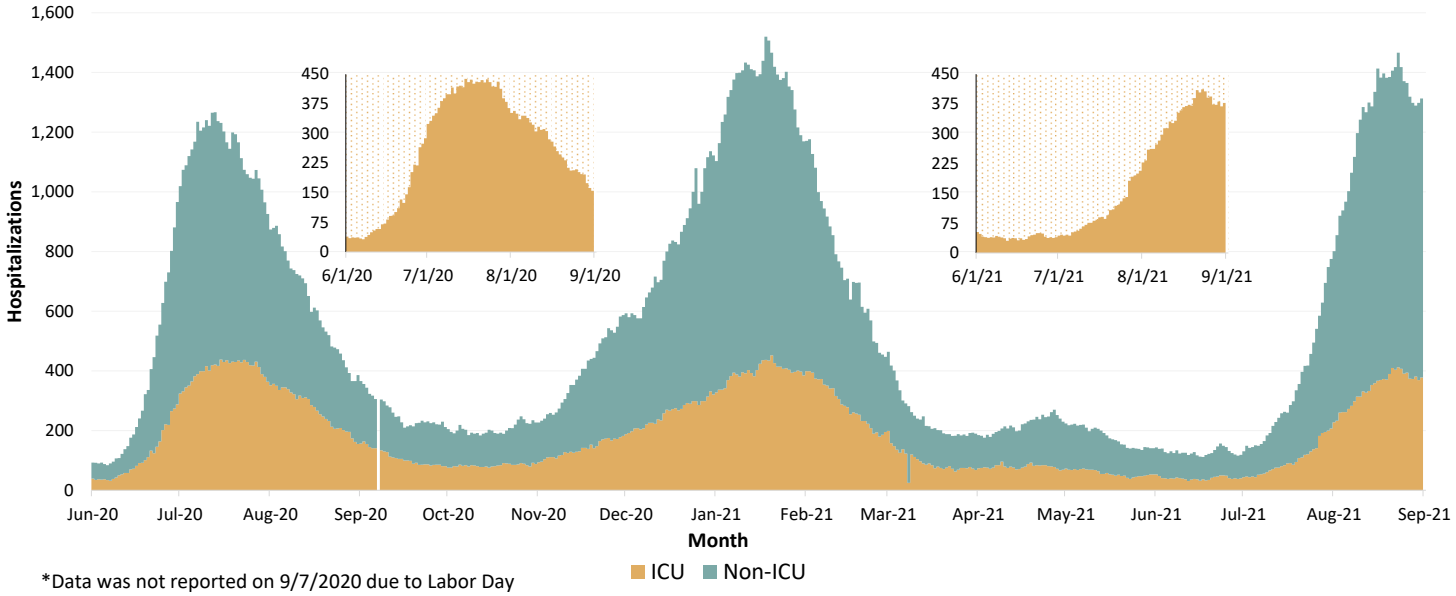
*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 09/13/2021.

*General and specialty hospitals in Bexar county designated by the Southwest Texas Regional Advisory Council as part of the local trauma/emergency healthcare system. Includes hospitals in the Baptist, Christus, Methodist, SW General, University, BAMC and VAMC systems treating COVID+ patients.

The number of cases in the ICU peaked at 412 in the middle of August 2021.The number admitted to the ICU has since dropped to 378 at the end of August. The average percentage of COVID+ patients admitted to the ICU continues to account **for about a third of overall hospitalizations.** The first surge displayed a peak in ICU cases about a month and half into the surge compared to the third surge which took almost two months to reach its peak.

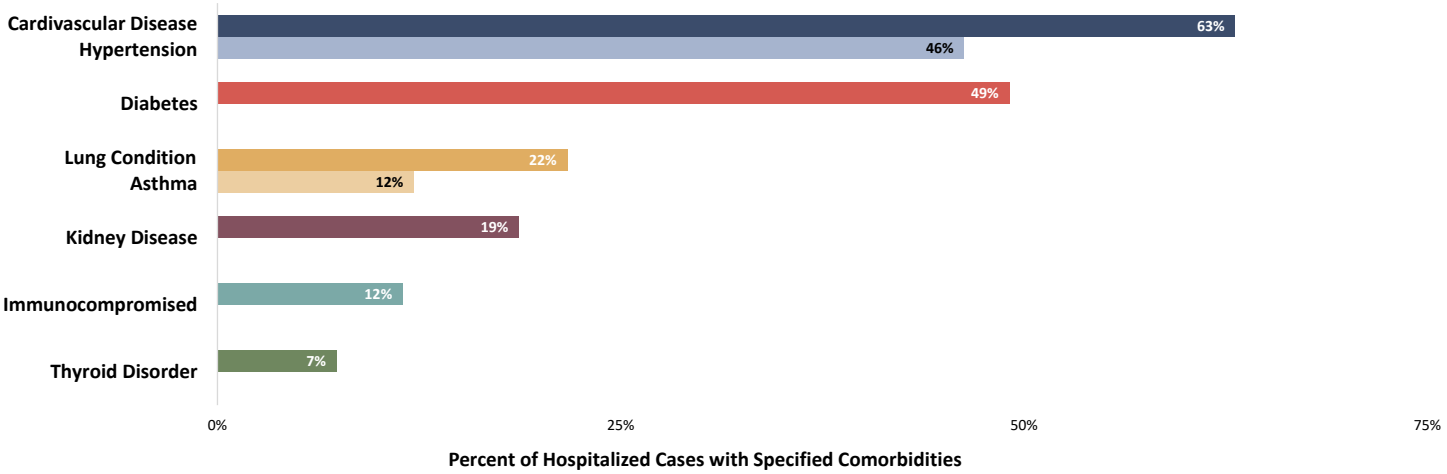
STRAC ICU and Non-ICU COVID-19 Patients in Bexar County Hospitals



*Data was not reported on 9/7/2020 due to Labor Day

Data Source: COVID-19 Daily Surveillance Data Public– STRAC Data, pulled on 08/09/2021

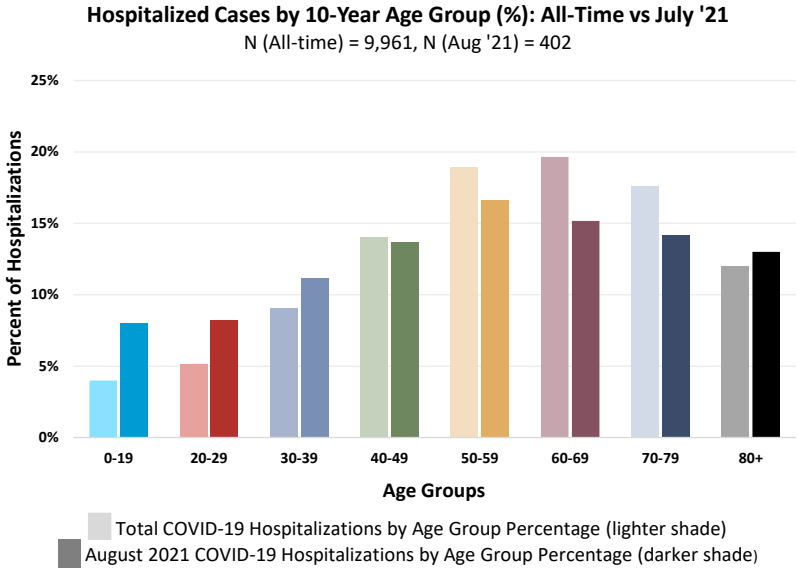
Hospitalized Cases with Specified* Comorbidities
(N=6,754*)



Data including the presence of at least one of the specified comorbidities associated with poor COVID-19 outcomes were available for 68% of the hospitalized cases (N=6,754). **Among these cases with at least one comorbidity, cardiovascular disease** (63%) **was the most prevalent** (46% reported hypertension specifically), **followed by diabetes** (49%).

Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease", and shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.
*Excludes 3,207 (32%) hospitalized cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcome, or for whom such comorbidity data were not available.

V. B. Hospitalization and Age



To date, 9,961 individuals (3.4% of all cases) have been hospitalized due to COVID-19, including 533 new hospitalizations in August 2021.

Throughout the pandemic, the three age groups that contributed the greatest percentages of all hospitalized cases were 50-59, 60-69, and 70-79; however, hospitalization trends among **younger age groups saw an increase during the month of August '21 when compared to all COVID-19 hospitalizations reported among the same age group (Feb '20 – August '21)**. Cases ages 0-19 years have accounted for 3.6% of hospitalizations over the entire pandemic — less than the 8% during the month of August.

In August, hospitalizations slightly increased for ages 80+, but declined among those 50-59, 60-69, and 70-79 when compared to all COVID-19 hospitalizations within the same age group throughout the pandemic.

On March '21, 26% to 39% of hospitalized cases were younger than the age of 50 — same age group increased to 46% - 48% from April '21 to June '21, declining to **41% during the month of August**.

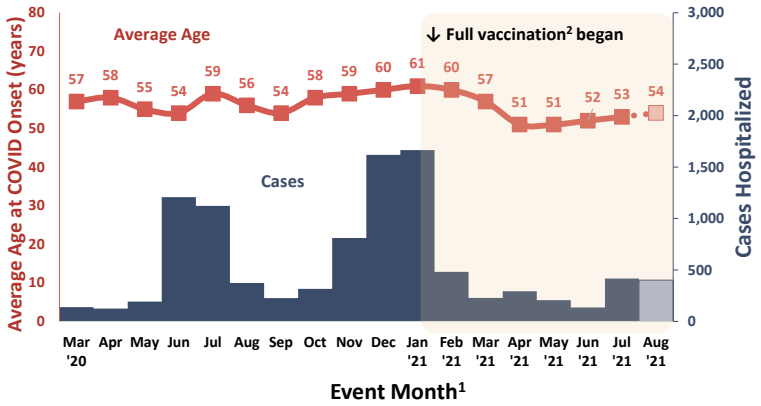
The average age of hospitalized cases declined from a high of 61 years in Jan '21, to 51 years in April and May'21, and has increased since then to 54 years of age.

The decline in average age coincides with availability of vaccination[2]. Full vaccination began among older individuals in the latter part of Jan '21, and was gradually extended to younger ages. San Antonio began vaccinating children age 12 and older on May 13th, 2021.

[1]A person is considered fully vaccinated two weeks after the second vaccine dose of 2-dose regimen, or two weeks after receiving a single shot of a 1-dose regimen.

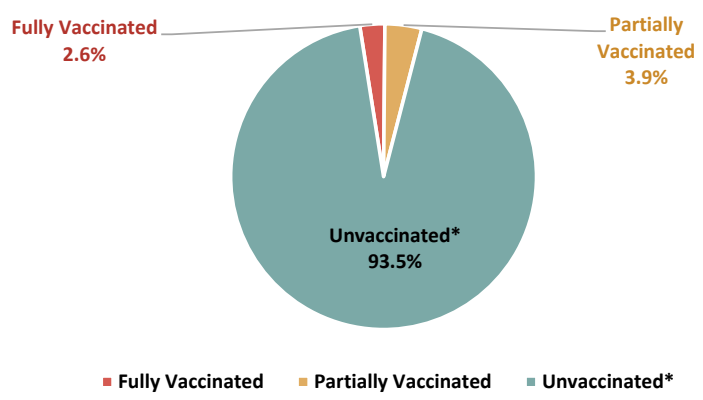
[2]Event date is the date of first positive test, or symptom onset (if available). This is not the date of hospitalization.

Hospitalized Cases: Numbers, Average Ages, and Vaccination
(N=9,959*)



*Excludes 2 hospitalized cases with Event Date in February
Note: The dotted line indicates that Aug. data may be incomplete at time of

COVID-19 Related Hopitalized Cases by Vaccination Status, since Jan 01, 2021 (N=3,825)



Of the 3,825 hospitalized cases whose COVID-19 onset was Jan 1st 2021 or later, a total of 149 (3.9%) are known to have been partially vaccinated, and 101 (2.6%) fully vaccinated (total 6.5%). The percent of hospitalized cases who were fully vaccinated increased from 0.12% in January, to 9.7% in August, reflecting the increased number of Bexar County residents. **Approximately 2.8% of fully vaccinated, and 6.0% of partially vaccinated cases, were hospitalized due to COVID-19.** Due to incomplete vaccination data at the time of analysis, it is not possible to estimate hospitalization rates for the unvaccinated.

V. C. Deaths

Through August '21, a total of 4,112 cases have died due to COVID-19 with deaths occurring primarily among older persons — **the average age of deceased cases is 69 years** (age 67 for males, 71 for females). Whereas the average age at COVID-19 onset is 36 years, to date, **74% of all deaths have occurred among cases 60 years of age and older**.

Among persons 80+ years of age who have COVID-19, the risk of death (case fatality) is 23% for males, and 16% for females.

Overall, 1.4% of all known COVID-19 cases among Bexar County residents have died due to this disease (1.7 deaths per 100 male cases of all ages, and 1.2 deaths per 100 female cases). Although more COVID-19 cases have occued among women than men, males continue to account for more than half of all deaths of known gender (56%).

Age-specific mortality rates† (curved lines on top graph) also show that **males have higher rates of death (per 10,000 population) compared to females**, in every age group 30-39 years and older. This pattern has persisted throughout the pandemic.

Age-adjusted rates‡ are now 287 per 100,000 males, and 173 per 100,000 females. The overall rate, including persons for whom gender is not available (N=36), is **225 deaths per 100,000 population**.

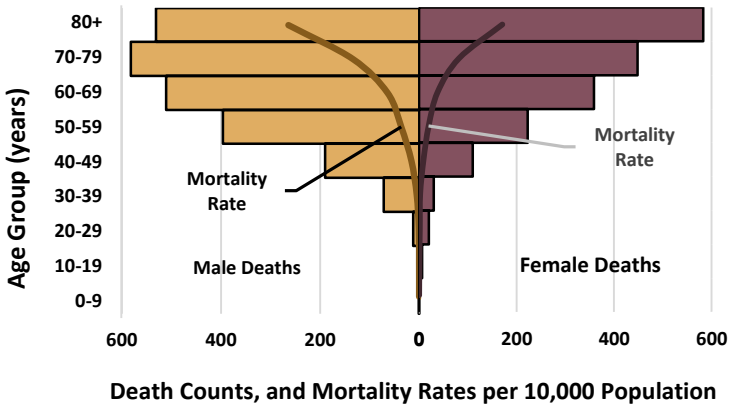
Full vaccination of older individuals began in the later part of January '21. Since Jan '21, the **average age of deceased cases has declined from 72 years, to 62 years** in July '21 (August '21 data are incomplete).

†Age-specific rates use ACS 5-yr 2019 gender-specific population estimates for Bexar County.

‡Age-adjusted rates use the ACS 5-yr 2019 gender-specific population estimates for Bexar County and the US Standard Population 2000 weights.

Deaths by Gender and Age Group, with Age-Specific Mortality Rates

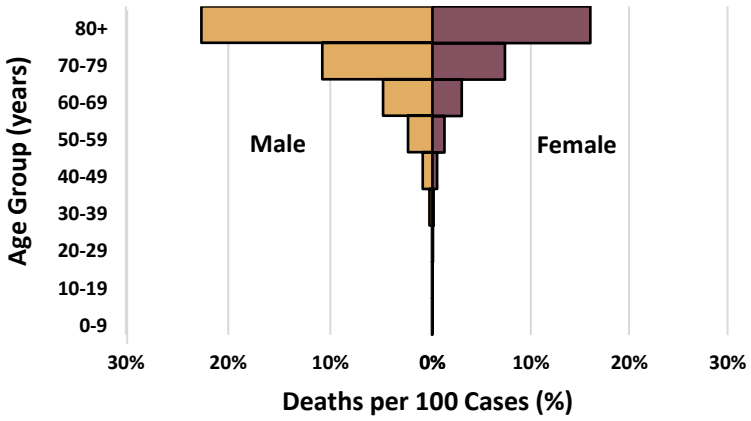
(N = 4,076*)



*Excludes 35 cases (0.8%) for whom gender and/or age are unavailable.

Case Fatality Rates*

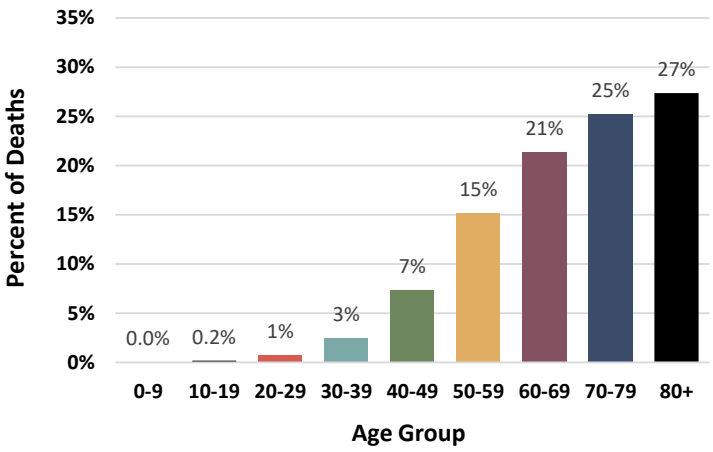
(N = 4,076*)



* N = 4,076 Deaths among 286,089 Cases. Excludes 35 Deaths (0.8%) and 7,190 Cases (2.5%) for whom gender and/or age are unavailable.

Age Distribution of Deceased Cases

(N=4,111*)



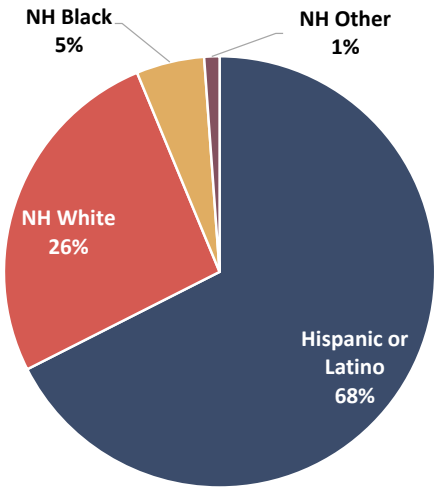
* Excludes one death with age not available.

Over half (53%) of all deaths due to COVID-19 have occurred to cases ages 70 years of age and older.

Deaths among children and young adults are rare, combined accounting for fewer than 1% of all deaths. To date, 41 cases younger than age 30 have died due to COVID-19.

Deaths by Race and Ethnicity

(N=3,663*)

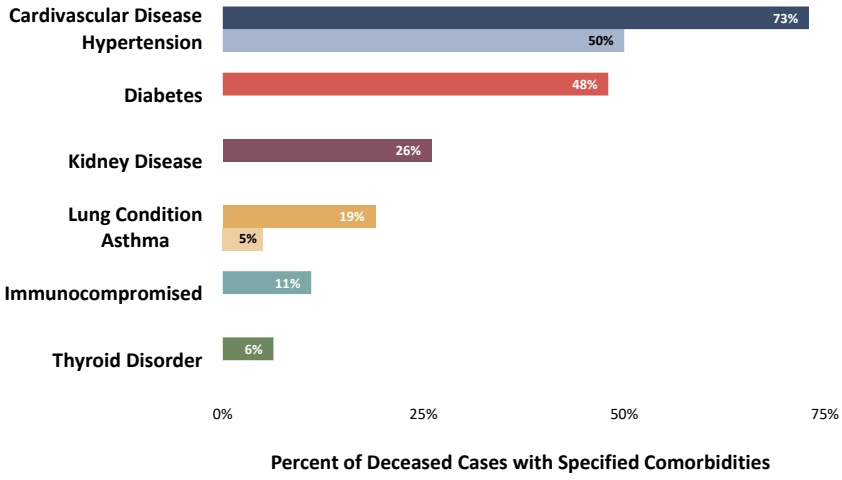


Of the COVID-19 related deaths with race/ethnicity data available, **Hispanic or Latino individuals continue to account for 68% of deaths,** compared to 60% of the Bexar County population identifying as Hispanic or Latino†.

*Excludes 449 deceased cases (11%) for whom race and ethnicity data are not available.
†Age specific rate use ACS 5-yr 2019 gender-specific population estimates for Bexar County.
‡Age-adjusted rates use the ACS-5 yr 2019 gender-specific population estimates for Bexar County and the US Standard Population 2000 weights.

Deceased Cases with Specified* Comorbidities

(N=2,842*)



Data including the presence of at least one of the specified comorbidities associated with poor COVID -19 outcomes were available for 69% of deceased cases (N=2,842).

Among deceased cases with at least one comorbidity, cardiovascular disease (73%) was the most prevalent, followed by diabetes (48%).

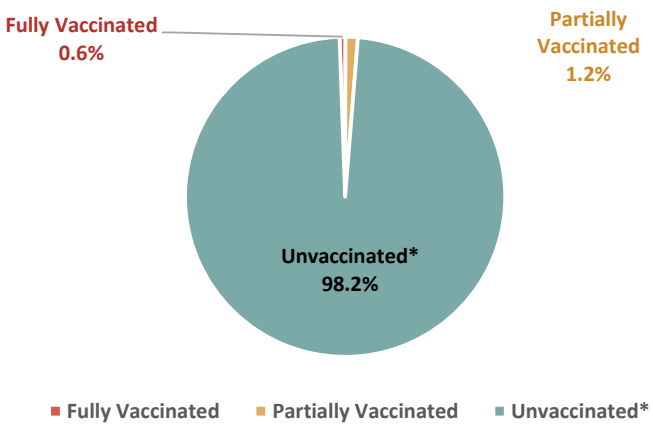
Note: For the purposes of this report, hypertension is included in the category "cardiovascular disease", and shown separately to highlight conditions of special interest. Similarly, asthma is included in "lung condition", and shown separately.

*Excludes 1270 (21%) deceased cases not reported to have at least one of these specific comorbidities associated with poor COVID-19 outcomes, or for whom data pertaining to these comorbid conditions.

Of the 1,690 COVID-19 related deceased cases with disease onset since Jan 1st 2021, a total of 31 (1.8%) are known to have received some vaccination: 10 (0.6%) were fully vaccinated, and 21 (1.2%) were partially vaccinated. Deaths among partially vaccinated cases occurred primarily in the first few months of the year.

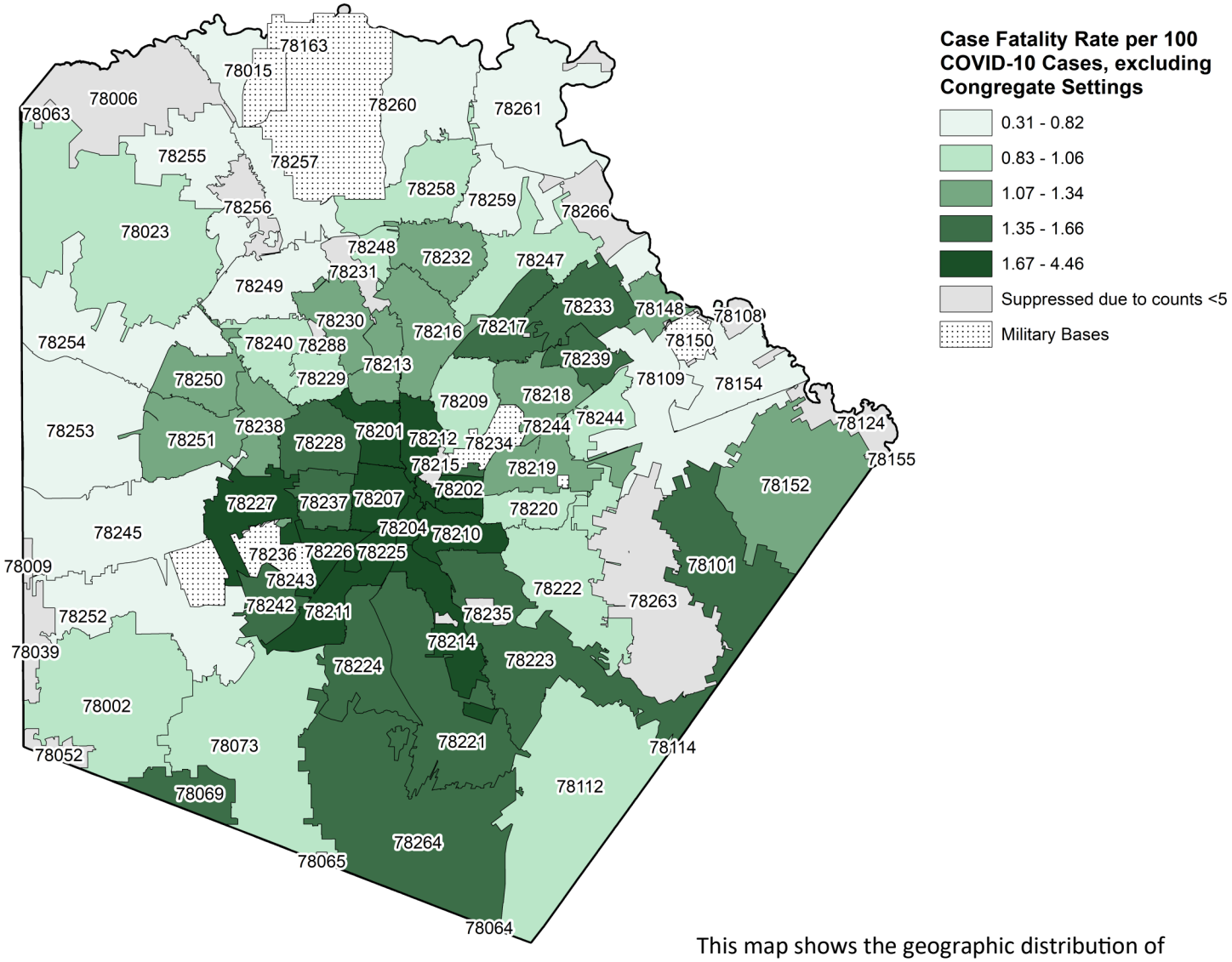
Case fatality rates were 0.3% for fully vaccinated, and 0.8% for partially vaccinated cases. Overall case fatality rates were 1.1%. Due to incomplete vaccination data at the time of analysis, it is not possible to estimate hospitalization rates for the unvaccinated. Mortality data were incomplete for July and August at time of analysis.

COVID-19 Related Deceased Cases by Vaccination Status, since Jan 01, 2021 (N=1,690)



COVID-19 Case Fatality Rate by Zip Code

(Excluding Congregate Settings)



Source: SAMHD COVID-19 case data up to 09/13/2021, event dates through 08/31/2021

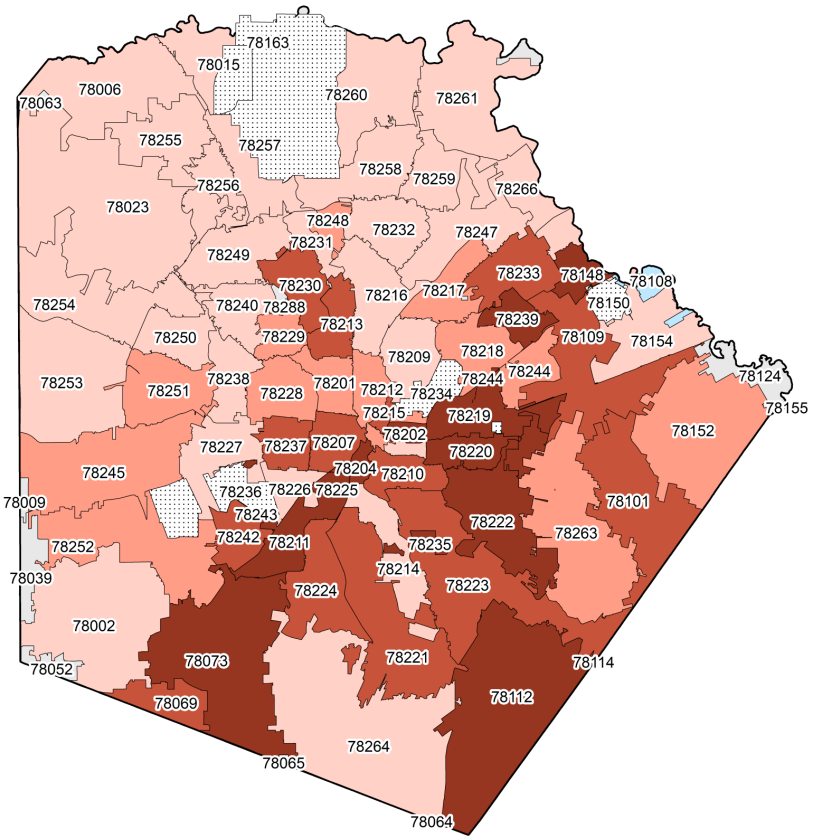
This map shows the geographic distribution of deaths per 100 COVID-19 cases* (case fatality rate), from the beginning of the pandemic through the end of August '21.

Higher rates (darker green) are generally observed in zip codes close to, and south of, downtown. This spatial distribution has remained consistent throughout the pandemic.

*Excludes cases occurring in congregate settings, defined here as nursing homes, assisted living facilities, jails, homeless shelters, rehabilitation facilities, and military barracks.

VI. Percent Change of COVID-19 Cases, June-July 2021

Percent Change in COVID-19 Cases from July '21 to August '21 by Zip Code

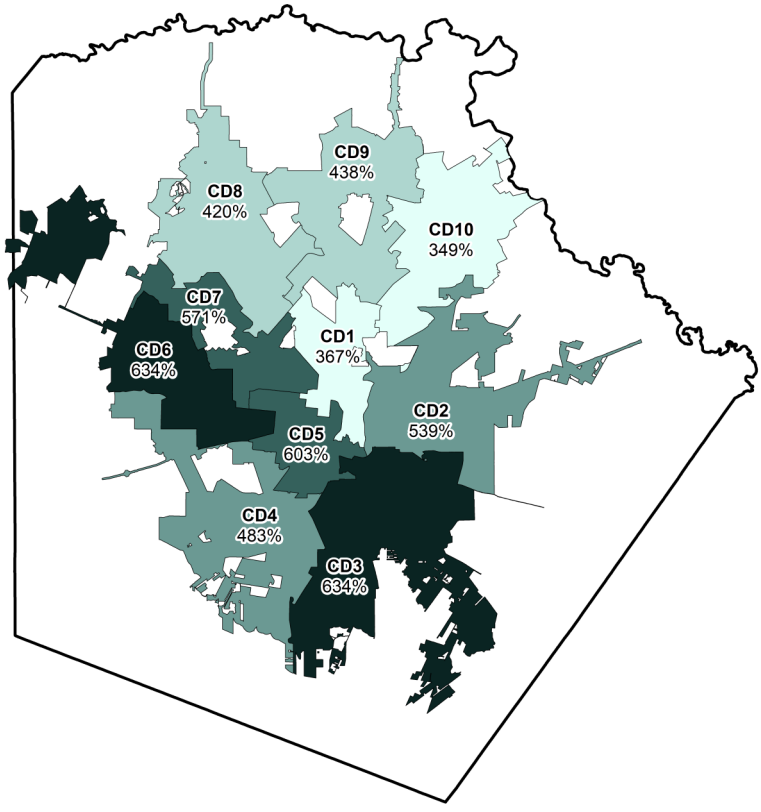


Percent Change in COVID-19 Cases from July 2021 to August 2021

- -14% - 0%
- 1% - 113%
- 114% - 134%
- 135% - 163%
- 164% - 288%
- Suppressed due to counts <5
- Military Bases

During the month of August 2021, majority of zip codes saw a percent increase in new COVID-19 cases. Several zip codes in the southern portion of Bexar County saw percent increases ranging from 164% to 288%, while zip codes in northwestern Bexar County saw percent increases ranging from 1-113%. This drop in percent change reflects the decrease in COVID-19 infections seen at the end of August 2021.

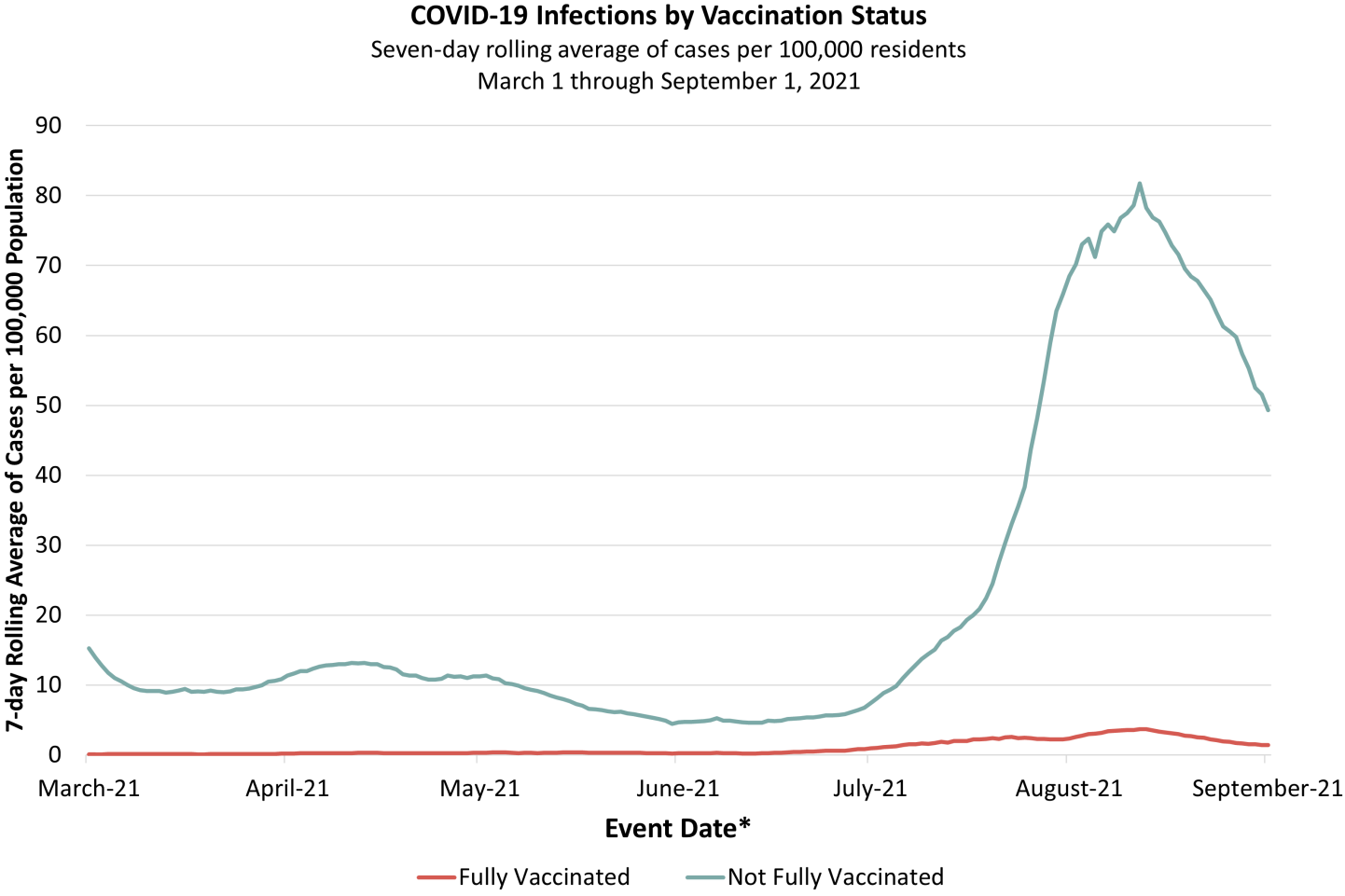
Percent Change in COVID-19 Cases from July '21 to August '21 by Council District



The map to the left depicts the percent change in COVID-19 cases from July 2021 to August 2021 by City of San Antonio Council District. In comparison to July 2021, **every council district continued to see a percent increase in newly diagnosed COVID-19 cases**, ranging from around 77% to over 168% in August 2021. Council Districts 2 and 5 both saw the largest increase of approximately 165% and 168%, respectively, more COVID-19 cases in August than in July 2021. **The City of San Antonio as a whole saw a 132% increase in new COVID-19 cases in August 2021 compared to July 2021.**

VII. Vaccinated and Unvaccinated COVID-19 Cases

The seven-day rolling incidence of fully vaccinated cases and unvaccinated cases peaked at 3.7 per 100,000 population and 82 per 100,000 population, respectively**. This represented approximately 50% increase from the end of July 2021 in both categories**. The seven-day rolling incidence then decreased in both fully vaccinated and unvaccinated cases to 1.4 per 100,000 population and 52 per 100,000 population, respectively.



*Event date refers to either illness onset date (for symptomatic cases) or test collection date (for asymptomatic cases or when onset is not available).
Data as of 9/13/2021